



Volume 3: Issue 4

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## West Nile Virus Newsletter

For the third year, the Department of Health (DOH) is using this electronic newsletter as a regular communication tool to help keep its partners informed about West Nile virus (WNV). The newsletter will be provided every two weeks throughout the warmer peaks of the mosquito season and less frequently during the colder, non-peak mosquito periods.

### Spring approaches, bringing mosquito season and WNV concerns

OLYMPIA — The coming of spring has Washington residents thinking of gardening, hiking and other outdoor fun. It's also time to think about preventing West Nile virus infection. The Washington State Department of Health says there's a lot you can do to protect yourself against mosquito-borne illness.

"We looked hard last year and tested a lot of mosquitoes, dead birds — even people — and we found no evidence of West Nile virus in our state," said Maryanne Guichard, director of the Office of Environmental Health and Safety. "The disease moved into Oregon and Idaho in 2004, so it seems likely that we may be next."

West Nile virus has been moving west since 1999 and, though it wasn't detected in our state last year, it was confirmed in two horses and some dead birds in Washington in 2002. That year, two dead birds tested positive — one each in Pend Oreille and Snohomish Counties. Follow-up analysis by a federal lab trying a new test later identified two other West Nile virus positive dead birds from 2002. One had been collected from Pierce County, the other from Thurston County. No human cases have been acquired in our state.

The complete news release is available at [http://www.doh.wa.gov/Publicat/2005\\_news/05-036.htm](http://www.doh.wa.gov/Publicat/2005_news/05-036.htm).

### West Nile virus expected in King County, Public Health says

*Public Health – Seattle & King County, News Release, April 21, 2005*

KING COUNTY, WASHINGTON - Today, Public Health – Seattle & King County announced that King County can expect to see cases of West Nile virus this summer, given that the

mosquito-borne virus infected people in surrounding states in 2004. In 2002, Pierce, Snohomish, and other Washington counties had cases of West Nile virus in birds.

“West Nile virus was waiting at our borders last year, though we were fortunate to be the only state in the lower 48 without cases,” said Dr. Sharon Hopkins, Public Health veterinarian for Public Health – Seattle & King County. “We may not be so lucky this year so we all need to take steps to avoid harboring mosquitoes and getting bitten.”

Dr. Hopkins joined Kathy Alm, Executive Director of Little Bit Therapeutic Riding Center in Woodinville, where the horses were given booster vaccinations for West Nile virus. “West Nile virus is a threat to horses as well as people, and the vaccinations help our horses stay safe. We serve people with disabilities who rely on us for essential therapy that only horses can provide, so we owe it to them as well as our horses to do everything we can to prevent West Nile virus.”

The complete news release is available at  
<http://www.metrokc.gov/HEALTH/news/05042101.htm>.

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## Message from Ecology on aquatic pesticide permits

*Department of Ecology, Water Quality Program, Publications, April 2005*

The Department of Ecology has released a focus sheet to clarify their position on permitting requirements for the use of aquatic pesticides (which includes the use of larvicides for aquatic mosquito control).

View Ecology’s publication at <http://www.ecy.wa.gov/biblio/0510048.html>.

The Department of Health will continue to offer an extension of its Aquatic Mosquito Control National Pollutant Discharge Elimination System (NPDES) Permit to entities in the state qualified to meet the conditions of the permit and best management practices for mosquito control.

More information about DOH’s NPDES Permit can be found at  
<http://www.doh.wa.gov/ehp/ts/Zoo/WNV/Permit.html>.

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## Canada's West Coast likely to face West Nile virus

*CBC News, CBC Health and Science News, April 5, 2005*

VANCOUVER - It's only a matter of time before West Nile virus spreads to British Columbia, public health experts say.

Scientists are meeting in Vancouver this week to discuss the latest methods to monitor and trap mosquitoes that spread the virus.

The virus has hit nearly all of North America, except for Atlantic Canada, the North and B.C.

Last year, the debilitating illness infected 25 Canadians. No one died. In the U.S., there were almost 2,500 cases last year, including 88 deaths.

"Here you have an exotic virus coming into New York City in 1999 and has managed to spread throughout much of North America in six short years," said Dr. Lyle Peterson, head of the West Nile section of the U.S. Centers for Disease Control.

"In the U.S., at least, it's caused about a million infections so far," added Peterson, who also had the mildest form of the virus and took months to recover.

Many think B.C.'s warmer and wetter weather makes it the next likely launch pad for West Nile.

"Now that's it's sitting just a couple states further south, the inevitability of it showing up seems more likely," said Robbin Lindsay of Health Canada.

Standard defences against West Nile include mosquito repellents, larvicides for standing water, and spraying insecticide.

A human vaccine is the great hope for scientists. Several clinical trials are in progress, but a vaccine likely won't be on the market for several years.

The news article can be viewed at <http://www.cbc.ca/story/science/national/2005/04/05/west-nile050405.html>.

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## NIAID Begins Clinical Trial of West Nile Virus Vaccine

*National Institutes of Health, National Institute of Allergy and Infectious Diseases, News Release, April 18, 2005*

A small trial testing the safety of an experimental vaccine targeting West Nile virus (WNV) opened today at the National Institutes of Health's (NIH) Clinical Center in Bethesda, MD. The vaccine, which will be tested first in 15 healthy adult volunteers, was developed for human clinical studies by researchers at the National Institute of Allergy and Infectious Diseases' (NIAID) Vaccine Research Center (VRC), and Vical Inc., San Diego, based on an animal vaccine tested at the Centers for Disease Control and Prevention (CDC). Vical also manufactures the experimental vaccine.

"Although the prevalence of West Nile virus disease fluctuates seasonally and regionally, it continues to pose a serious public health threat, especially to older adults and people with weakened immune systems," says Anthony S. Fauci, M.D., director of the NIAID.

The experimental vaccine is composed of a small, circular piece of DNA — called a DNA plasmid — that contains genes that code for two key surface proteins of the West Nile virus. When the vaccine is injected into the muscle, the inner machinery of the muscle cells "reads" the DNA and converts it into two WNV proteins. Recognizing that the proteins are foreign, the muscle cells display them on their surface to alert the body's immune system — both helper T

cells, which spur the production of antibodies to block the WNV from gaining entry into cells, and killer T cells, which kill WNV-infected cells outright.

"The DNA vaccine's exploitation of both cellular and antibody immunity offers a potentially potent defense against West Nile virus," says Barney Graham, M.D., Ph.D., chief of the VRC's Clinical Trials Core Laboratory. Adds Dr. Graham, "In our experience in clinical trials, DNA vaccines generally cause few side effects, making them a promising alternative to conventional vaccines."

The complete news release is available at <http://www.nih.gov/news/pr/apr2005/niaid-18.htm>.

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## Research

*Centers for Disease Control and Prevention, Emerging Infectious Diseases, Volume 11, Number 4 – April Issue*

Molecular Mechanisms of West Nile Virus Pathogenesis in Brain Cells. Wee-Lee Koh and Mah-Lee Ng, National University of Singapore  
<http://www.cdc.gov/ncidod/eid/vol11no04/04-1076.htm>

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## Community Comments

Let us hear your comments on this newsletter, your needs, or things you would like to see, by sending them to Maryanne Guichard, 360.236.3391 or [maryanne.guichard@doh.wa.gov](mailto:maryanne.guichard@doh.wa.gov).

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## WNV Web Resources

Washington State Department of Health [www.doh.wa.gov/wnv](http://www.doh.wa.gov/wnv)  
Center for Disease Control and Prevention [www.cdc.gov/ncidod/dvbid/westnile/](http://www.cdc.gov/ncidod/dvbid/westnile/)  
Cornell University, Environmental Risk Analysis Program [environmentalrisk.cornell.edu/WNV/](http://environmentalrisk.cornell.edu/WNV/)  
Washington State University Cooperative Extension [wnv.wsu.edu/](http://wnv.wsu.edu/)  
Washington State Department of Agriculture  
[agr.wa.gov/FoodAnimal/AnimalHealth/Diseases/WestNileVirus/default.htm](http://agr.wa.gov/FoodAnimal/AnimalHealth/Diseases/WestNileVirus/default.htm)

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## Article Submission

We are interested in receiving articles for future publications of the WNV Newsletter. Please submit articles to Ben Hamilton, [benjamin.hamilton@doh.wa.gov](mailto:benjamin.hamilton@doh.wa.gov).

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## DOH Contact List for West Nile Virus

**General Public Toll-Free Information Line 1.866.78VIRUS**

**To subscribe to this newsletter and for Publications: Brochures/Response Plan/Fact Sheets**  
Cyndi Free, 360-236-3384 or [cyndi.free@doh.wa.gov](mailto:cyndi.free@doh.wa.gov)

**Surveillance: Mosquito**

Jo Marie Brauner, 360.236.3064 or [jomarie.brauner@doh.wa.gov](mailto:jomarie.brauner@doh.wa.gov)

**Animal Surveillance: Dead bird and horse surveillance, case reporting, and laboratory assistance, as well as general WNV response**

Tom Gibbs, 360.236.3060 or [tom.gibbs@doh.wa.gov](mailto:tom.gibbs@doh.wa.gov)

**Aquatic Mosquito Control National Pollutant Discharge Elimination System (NPDES) General Permit: Training, technical assistance**

Ben Hamilton, 360.236.3364 or [benjamin.hamilton@doh.wa.gov](mailto:benjamin.hamilton@doh.wa.gov)

**WNV in Humans: Clinical information, case reporting, and laboratory testing**

Call your local health jurisdiction or DOH Communicable Disease Epidemiology, (206) 418-5500 or (877) 539-4344.

**Assistance with news releases and media response**

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